

BRIEF REPORT

Bullying Prevention in Schools by Targeting Cognitions, Emotions, and Behavior: Evaluating the Effectiveness of the REBE-ViSC Program

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The effectiveness of a class-based antibullying prevention program on cognitions, emotions, and behaviors was investigated. The program consists of a cognitive-behavioral (Rational Emotive Behavioral Education; REBE) and a behavioral (Viennese Social Competence; ViSC) component. The REBE program is based on rational emotive behavioral theory and contains 9 student lessons. The ViSC program is based on social learning theory and comprises 10 student lessons. The order of the programs was experimentally manipulated. The REBE-ViSC program was implemented in 5 schools (14 classes), the ViSC-REBE program was implemented in 3 schools (9 classes), and 3 schools (11 classes) served as an untreated control group. Data were collected during 1 school year at pretest, midpoint, and posttest. Emotions (overt and internalizing anger), cognitions (learning and entitlement), and behaviors (bullying perpetration and bullying victimization) were measured with self-assessments. To examine the effectiveness of the REBE-ViSC/ViSC-REBE program, multilevel growth models were applied (time points at Level 1, individuals at Level 2, and classes at Level 3). The analyses revealed that the program effects differed depending on the order of the programs. The REBE-ViSC condition was more effective in changing negative emotions than the ViSC-REBE condition; both experimental conditions were effective in reducing dysfunctional cognitions, whereas no behavioral change was found in the 2 experimental groups when compared with the control group. To improve program effectiveness regarding behavioral changes, a multilevel whole-school approach including a teacher component is recommended.

Keywords: bullying, victimization, REBE, evidence-based prevention, anger

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Schools have an important role in raising healthy children by fostering both their cognitive development and socioemotional development. Developmental studies indicate that the effective

mastery of social-emotional competencies is associated with greater well-being and better school performance, whereas the ineffective mastery of social-emotional competencies can lead to a variety of personal, social, and academic difficulties, such as aggressive behavior and bullying. Bullying is a subcategory of aggressive behavior characterized by (a) intentional harm-doing, (b) repetition, and (c) imbalance of power (e.g., Olweus, 1991; Roland, 1989; Sharp & Smith, 1993). International research demonstrates that bullying is a severe problem in schools all over the world; bullies, victims, and bully/victims experience psychosocial adjustment problems that persist later in life (Currie et al., 2012; Evans, Fraser, & Cotter, 2014; Smith, 2011).

The most recent meta-analysis supports the effectiveness of universal school-based programs that promote students' social and emotional learning (SEL), but found mixed results regarding the effectiveness of bullying prevention programs (Durlak, Weissberg, Dymnicki, Taylor, & Schellinger, 2011; Evans et al., 2014; Smith, Salmivalli, & Cowie, 2012; Ttofi & Farrington, 2011). Although interventions appear to be impactful on social-emotional learning, the changing of bullying behavior has not been as successful and warrants further program development and evaluation (Espelage, Low, Polanin, & Brown, 2013).

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As an SEL program, Rational Emotive Behavioral Education (REBE) is based on rational emotive behavioral theory, and aims to teach students to recognize their negative dysfunctional emotions, especially anger, to discover, dispute, and find rational alternatives to low frustration tolerance (LFT; the belief that a situation is unbearable, intolerable) beliefs (Trip & Bora, 2010). The ViSC program is based on social learning theory, and aims to reduce bullying and aggressive behavior by fostering empathy and perspective taking, by enhancing responsibility, and by broadening the behavioral repertoire among as many students in the school as possible (Strohmeier, Hoffmann, Schiller, Stefanek, & Spiel, 2012). Although these two programs show some similarities, they also have distinctive features. They are based on different mechanisms of change. Thus, the rationale of the present study was to combine a program based on cognitive mechanism of change (REBE) with a program based on behavioral mechanisms of change (ViSC) to increase their positive effects in reducing bullying and aggressive behaviors. The combined program was implemented in classes, and its effectiveness regarding emotion regulation, dysfunctional cognitions, and behavior was evaluated.

Targeting Emotions, Cognitions, and Behaviors

The interconnections between anger, dysfunctional cognitions, and aggressive behavior have been supported by many studies. Anger dysregulation is associated with concurrent and later externalizing problems in school (Morris, Silk, Steinberg, Terranova, & Kithakye, 2010). Expressed anger and aggressive behavior are associated with social skills deficits, poor anger management, and depression (Flanagan, Allen, & Henry, 2010). Aggressive children often endorse goals that involve revenge, dominance, and self-interest; their response decisions are less prosocial. The pattern of aggressive behaviors is different for bullies and bully victims; the first are more goal oriented and the last are more impulsive (Espelage & Horne, 2008). In preadolescence, anger has also been found to be related to bullying behavior (Gradinger, Strohmeier, & Spiel, 2012; Salmivalli & Nieminen, 2002).

Aggressive children are more likely to select aggressive responses to ambiguous provocation scenarios, to rate aggressive solutions to peer's conflicts more favorably, to perceive fewer negative consequences, and to ascribe more positive outcomes to behaving aggressively (Kupersmidt, Stelter, & Dodge, 2011). In their meta-analytical study, Orobio de Castro, Veerman, Koops, Bosch, and Monshouwer (2002) concluded that hostile attributional biases predict aggressive behavior. The link between irrational beliefs and anger has been suggested by Ellis (1977) and indicated by several studies (David, Ghinea, Macavei, & Kallay, 2005; Ford, 1991; Jones & Trower, 2004). In their research, Sullivan and Geaslin (2001) suggested that LFT is linked to both affective (anger) and cognitive (hostility) domains of aggression. Martin and Dahlen (2005) indicated that LFT is the main belief category linked to anger.

To summarize, the effect of a bullying prevention program is strengthened when it addresses the social and emotional factors that lead to bullying and promotes positive youth development. Therefore, the REBE-ViSC program was developed.

Prevention and Intervention Programs

There are many universal school-based programs that target different risk and protective factors linked to aggression, bullying, and victimization. From a socioecological perspective, bullying is understood as a systemic problem with mechanisms operating on several levels: individual, family, peer, classroom, and school (Espelage & Horne, 2008; Swearer & Espelage, 2004, 2011). Both ViSC and REBE are preventive programs targeting individual, peer, and classroom factors involved in bullying and aggressive behaviors.

ViSC Social Competence Program

The ViSC program engages a systemic perspective and targets teachers, students, and parents. On the school level, in-school trainings for all teachers are offered to distribute basic knowledge on bully victim behavior. On the class level, teachers implement a class program consisting of several units. The main goals of these units are (a) to foster empathy and perspective taking, (b) to enhance responsibility, and (c) to broaden the behavioral repertoire in critical social situations among as many students in the class as possible. On the individual level, teachers are trained to conduct talks with bullies, bully victims, and victims in accordance with commonly shared procedures (for details, see Strohmeier et al., 2012; Yanagida, Strohmeier, & Spiel, 2015).

The ViSC program combines knowledge of social learning theory (Bandura, 1973), empirical knowledge on the relationship between aggression and bullying (Roland & Idsøe, 2001; Salmivalli & Nieminen, 2002), and social information-processing theory (Crick & Dodge, 1994). To implement the program, a cascaded train-the-trainer model has been implemented several times in Austria (for details, see Strohmeier et al., 2012). The effectiveness of the program has been tested within a large-scale randomized control study. Results suggest that the program is effective in changing cyberbullying ($d = 0.39$), cyber-victimization ($d = 0.29$), and traditional victimization ($d = 0.72$) in schools (Gradinger, Yanagida, Strohmeier, & Spiel, 2015; Yanagida et al., 2015). It is hypothesized that the combination of the ViSC and REBE programs would improve program effectiveness regarding traditional bullying behavior because the REBE element contains specific exercises for aggressive children on a class level that are lacking in the ViSC program.

The REBE Program

The REBE program is based on the theory of Rational Emotive Behavioral Therapy (REBT), developed by Albert Ellis (1962, 1994). The therapeutic process in REBT is guided by the ABCDE model, in which A refers to the activating event (the situation one person is confronted with), B refers to the person's evaluations of the situation (rational/irrational beliefs), C is represented by the emotional or behavioral consequences (functional/dysfunctional), D refers to the disputation of the irrational beliefs (the main focus of therapy), and E refers to assimilating more adaptive, efficient beliefs.

The REBE program (Trip & Bora, 2010) targets LFT and anger. LFT refers to the refusal of one person to accept the difference between desire and reality. The program is structured in accor-

dance with the model of anger developed by Tafrate and Kassino (2006), which postulates that anger episodes involve: (a) triggers, (b) trigger appraisal/evaluations, (c) the experience of anger, (d) the expression of anger, and (e) the outcome. Thus, the REBE activities target anger triggers, personal experience of anger, anger consequences, and LFT. Implemented in 2009–2010 as a prevention program for aggressive behavior in secondary schools, REBE was efficient in reducing LFT beliefs ($d = 0.30$) and disruptive behaviors ($d = 0.64$; Trip & Bora, 2011). The results are similar to those of other studies regarding the effectiveness of REBE in promoting children and adolescents' socioemotional skills (Bernard, 2008; Trip, McMahon, Bora, & Chipea, 2010; Trip, Vernon, & McMahon, 2007; Wilde, 1996).

The Present Study

The rationale of the present study is that the combination of the behavioral mechanism of change represented in the ViSC program and the cognitive mechanism of change represented in the REBE program is beneficial for changing dysfunctional cognitions, emotions, and behaviors. While the ViSC program covers a systemic "bullying as a group phenomenon" approach, the REBE program contains important elements for aggressive children to better cope with cognitions and emotions preceding aggressive behavior and bullying. Therefore, the present study investigates the effectiveness of the REBE-ViSC Program over one school year (October to June) in reducing anger, dysfunctional cognitions, and bullying behavior. The REBE-ViSC program is a class-based intervention and combines 9 REBE units and 10 ViSC units. The REBE-ViSC program was implemented in 23 Grade 6 classes by well-educated external trainers who delivered the units in two orders (REBE-ViSC vs. ViSC-REBE).

Effectiveness of the program is indicated by a steeper decrease regarding dysfunctional emotions, cognitions, and behaviors in the two intervention groups (REBE-ViSC vs. ViSC-REBE) compared with the control group. Hierarchical growth models controlling for the nested data structure were applied. Significant interaction effects (Intervention Groups \times Time) indicate program effectiveness. We hypothesize that students in the two intervention groups (REBE-ViSC, ViSC-REBE) would show a better trend over time in all dependent variables compared with students in the control group. In addition, differences depending on the order of the two programs (REBE-ViSC vs. ViSC-REBE) were also examined in an explorative way.

Method

Design

Participants were sixth grade students enrolled in 11 different schools, randomly chosen among all schools in Oradea, Romania,

that had a sixth grade class. The 11 participating schools were randomly distributed in three groups: a control group including three schools and a total of 315 students; the REBE-ViSC experimental group including five schools and a total of 385 students; and the ViSC-REBE experimental group including three schools and 270 students. As shown in Table 1, the REBE-ViSC group received nine REBE lessons, followed by 10 ViSC lessons; the ViSC-REBE group received 10 ViSC lessons, followed by nine REBE lessons. Data were gathered three times: in October 2011 (pretest), March 2012 (midpoint), and June 2012 (posttest).

Procedure

The first step was to sign a collaboration protocol with the Bihor County School Inspectorate. After the protocol was signed, all of the schools from Oradea were contacted by phone and asked for their participation in the project. The schools that agreed to participate in the training (REBE and ViSC) were assigned to the experimental group (eight schools); the others were in the control group (three schools). Participation in the program and in the longitudinal study was based on active parental and child consent. Data were collected through online questionnaires, which were completed during one regular school hour in the classes under the supervision of two trained research assistants. Prior to data collection, students were assured that their answers would be kept confidential.

Training Implementation

Training sessions were utilized to ensure treatment integrity of the contents and all trainers' equal proficiency in delivering both the REBE and the ViSC. All trainers had prerequisite knowledge of REBT (they all took counseling and psychotherapy classes) and REBE (they participated in a 4-hr REBE program presentation). For the ViSC program, the program developers from Austria held an 8-hr training session of the program contents. All materials necessary for these training sessions (e.g., PowerPoints, worksheets, guidelines) were translated from German to Romanian and English and were provided to the trainers. Following each activity, the trainers completed the implementation form, which assesses their perceptions of the methods they used, the way they organized the entire activity, the components of the lesson they completed, the activity's strengths and limitations, the way students engaged, and an overall appreciation. They also had weekly supervision meetings with Romanian trainers.

The REBE program consisted of nine weekly activities: "Anger Triggers"; "Anger and Other Emotions"; "Anger Scale"; "Consequences of Anger"; "I Do Not Feel Like It!"; "The Mask of I Can Tolerate"; "A Story of Tolerance"; "The Teacher Accuses"; and "I'm Well-Disciplined" (for more details, see Trip & Bora, 2010).

Table 1
Study Design

Time table	Pretest (October)	October to February	Midpoint (March)	March to June	Posttest (June)
Intervention Group 1 (5 schools)	Data collection	9 REBE activities	Data collection	10 ViSC activities	Data collection
Intervention Group 2 (3 schools)	Data collection	10 ViSC activities	Data collection	9 REBE activities	Data collection
Control Group (3 schools)	Data collection	No intervention	Data collection	No intervention	Data collection

Note. REBE = Rational Emotive Behavioral Education; ViSC = Viennese Social Competence.

The ViSC program consisted of 10 weekly activities. During Units 1 through 8, the students work together to find ways to prevent aggressive behavior in their class. The lessons included the following topics: “Why are rules important in our lives and what rules do we want in our class?”; “How can we recognize critical social situations and what can we do to help improving the situation?”; “How can we recognize the emotions of others and what can we do to help them feel better?”; “How can we recognize our own emotions and what can we do to cope with them to feel better?”; and “What can we do if we are treated in a mean and unfair way by others?” During Units 8 and 10, the students work together to achieve a positive, common goal (for more details, see Strohmeier et al., 2012).

Participants

In total, 970 Grade 6 students (315 control, 270 ViSC-REBE, 385 REBE-ViSC), nested in 35 classes in 11 schools, participated in at least one occasion of measurement and were included in the current study. At Wave 1 (pretest), the sample comprised 806 students, with a mean age of 11.82 years ($SD = 0.49$, minimum = 10, maximum = 14).

Of the total sample, 514 of the participants identified themselves as male (53%), and the rest identified themselves as female. The gender distribution between the groups was similar to that of the total sample, with 49.2% of the participants in the control group, 55.9% in the ViSC-REBE group, and 54% in the REBE-ViSC group identifying themselves as male.

Regarding the language spoken, less than 3% of the total sample (28 students) identified their native language as being different than Romanian; however, all were proficient Romanian speakers, as proven by the fact that they were enrolled in classes taught in Romanian. Regarding the social-economic status of their families at the start of the study, 91.4% of the participants reported that their father was employed, and 83.64% reported their mother was employed, with only 10 (1%) of the participants reporting both of their parents as being unemployed.

Missing Data

In total, 808 students participated in the pretest, 729 at the midpoint, and 545 in the posttest. More specifically, 357 students participated in all three occasions of measurement, 389 students in two occasions of measurement, and 224 students in one occasion of measurement. There were no differences between students with missing data at pretest joining the study from the midpoint on and students participating in all three occasions of measurement. However, students who failed to participate at midpoint and/or posttest had lower scores in victimization ($d = 0.142$; see Table S1 of the online supplemental materials). Because of the online data collection process, missing data in the submitted questionnaires were rare and could generally be traced to a computer system failure.

In order to investigate the impact of missing data, the main analysis of the present study was repeated, discarding data from students participating in only one measurement. There was no substantial difference in terms of statistical significance for the analysis with or without this subgroup of participants, indicating negligible impact of missing data on the results (see Table S2 of the online supplemental materials). Full information maximum

likelihood estimation under the missing at random assumption was used to deal with missing data (Enders, 2010), which is a commonly used method in intervention research (e.g., Tasca & Lampard, 2012; Williford et al., 2013).

Measures

The measures were selected to capture the main variables of emotions (anger), cognitions (LFT), and behavior (bullying others).

Anger Regulation and Expression Scale (ARES; DiGiuseppe & Tafrate, 2011). The ARES is an instrument designed specifically for children and adolescents aged 10 to 17. The original English version of the ARES consists of 75 items that assess 25 aspects of anger. For the present analysis, two subscales were used: (a) Internalizing Anger, and (b) Overt Anger. Answers to all questions were rated on a 5-point scale with the following response choices: 1 = *never/never and hardly ever*; 2 = *hardly ever/about once a month*; 3 = *sometimes/about once a week*; 4 = *often/about several days a week*; and 5 = *always/almost every day*. Cronbach's alpha coefficients were .805, .809, and .807 (on the pretest, midpoint, and posttest, respectively) for internalizing anger, and .884, .896, and .906 for overt anger.

The Scale of Low Frustration Tolerance for Students (Trip & Bora, 2011) is a 64-item instrument measuring LFT for teachers' behaviors, LFT for learning activities, LFT for school rules, LFT for other students' behavior, LFT for emotions, discomfort intolerance, entitlement, and rationality. For the present analysis, two subscales of this instrument were used: LFT Learning and LFT Entitlement. These two subscales were chosen because they correspond best with the goals of the intervention program. Answers to all questions were rated on a 5-point scale with the following response choices: 1 = *strongly disagree*; 2 = *disagree*; 3 = *neither agree nor disagree*; 4 = *agree*; and 5 = *strongly agree*. Cronbach's alpha coefficients were .873, .916, and .932 (for pretest, midpoint, and posttest, respectively) for the LFT Learning scale, and .864, .884, and .913 for the LFT Entitlement scale.

Bullying perpetration and bullying victimization. The bullying and victimization scales consist of one global item and three specific items covering different forms of bullying. The three specific items were similar to the global ones, except that they described specific forms of bullying and victimization. Answers to all questions were rated on a 5-point scale with the following response choices: 0 = *not at all*; 1 = *once or twice*; 2 = *two or three times a month*; 3 = *once a week*; and 4 = *nearly every day*. Cronbach's alpha coefficients were .825, .826, and .879 (for pretest, midpoint, and posttest, respectively) for the Bullying Perpetration scale, and .799, .839, and .892 (pretest, midpoint, and posttest) for the Bullying Victimization scale.

Analytic Strategy

Multilevel growth modeling (Hox, 2010) was used to test the program's efficacy concerning emotions, cognitions and behavior. The program SPSS.22 was used to analyze hierarchical linear modeling based on three levels (Level 1 = time; Level 2 = student; Level 3 = class). This analysis adequately considers the nested data structure, time nested in students, and students nested in classes. We did not include the school level in analyses because

we had only 11 schools in the sample, which does not meet sample size requirements for including another analytic level (Hox, 2010). Note that Maas and Hox (2005) showed that analyses with only 10 groups result in severely biased variance components and standard errors. Moreover, in the present study, the intraclass correlations on school level were very low ($M = .020$, $SD = 0.016$), resulting in a negligible impact of the design effect on standard error estimation (Snijders & Bosker, 2012).

On the measurement level, the model included time and a squared term for time measured in months. Time was conceptualized as a continuous variable assessing the time lag from pretest in months, that is, 0 = pretest (October), 4 = midpoint (March), and 7 = posttest (June). The predictor time was included to account for the linear trend, and the squared term for time was included to account for nonlinear trends of the dependent variables in the model. On the student level, sex was included as covariate. At the classroom level, the exposure to the intervention was included as predictor. The exposure to the intervention was dummy coded with control group as the reference category, resulting in two dummy-variables (a) ViSC-REBE versus control, and (b) REBE-ViSC versus control. Cross-level interaction terms were included to test the program effectiveness over time. The interaction of ViSC-REBE versus Control \times Time and REBE-ViSC versus Control \times Time represents the differential linear trend by group for the dependent variables over time (i.e., intervention effect).

The model equation is given by $Y_{ij} = \pi_{0ij} + \pi_{1ij}(\text{time}) + \pi_{2ij}(\text{time})^2 + e_{ij}$ on the measurement level, by $\pi_{0ij} = \beta_{00j} + \beta_{01j}(\text{sex}) + r_{0ij}$ on the student level, and by $\beta_{00j} = \gamma_{000} + \gamma_{001}(\text{intervention}) + u$ and $\pi_{1ij} = \gamma_{100} + \gamma_{101}(\text{ViSC-REBE vs. Control}) + \gamma_{102}(\text{REBE-ViSC vs. Control})$ on the class level.

Results

Descriptive Statistics for Outcome Variables

As a first step, the means and standard deviations of the two emotions (overt anger, internalizing anger), the two cognitions (LFT entitlement, LFT learning), and the two behaviors (bullying perpetration, bullying victimization) are reported by wave of data collection (pretest, midpoint, and posttest) in Table 2.

Results are reported separately by wave, intervention, and control group.

Intervention Effects

In the main analysis, multilevel growth models were analyzed investigating intervention effects separately for two emotions (overt anger, internalizing anger), two cognitions (LFT entitlement, LFT learning), and two behaviors (bullying perpetration, bullying victimization), controlling for the covariate sex (see Table 3).

Results revealed intervention effects for cognitions (ViSC-REBE \times Time and REBE-ViSC \times Time). Both intervention groups showed a stronger decrease over time in LFT entitlement (Cohens $d = 0.32$ for ViSC-REBE, and 0.31 for REBE-ViSC) and in LFT learning (Cohens $d = 0.64$ for ViSC-REBE, and 0.62 for REBE-ViSC) than the control group while controlling for sex. In addition, there was an intervention effect for one emotion (overt anger). One intervention group showed a stronger decrease over time in expressing anger through aggressive behaviors than the control group (REBE-ViSC vs. Control \times Time) while controlling for sex (Cohens $d = 0.31$). All other intervention effects for emotions (internalizing anger) and behaviors (bullying perpetration, bullying victimization) were not statistically significant. Trajectories for all dependent variables based on the model-implied predicted scores are depicted in Figure 1.

Discussion

International comparative studies show that bullying is a severe problem in schools all over the world (e.g., Currie et al., 2012), and there is no doubt that evidence-based prevention programs are needed (Strohmeier & Noam, 2012). Although several prevention programs have been developed to prevent aggressive behavior and bullying during the last decade (Evans et al., 2014; Tofi & Farrington, 2011), the combination of a rational emotive behavioral program (REBE) and behavior-based antibullying program (ViSC) is rather rare. Because it was feasible to combine the class component of the ViSC program with the REBE program, in the present study, it was possible to examine the effects of the REBE-ViSC and ViSC-REBE program on emotions, dysfunctional cognitions, and bullying behavior.

Table 2
Descriptive Statistics for the Variables: Means and Standard Deviations

Variables	Control			ViSC-REBE			REBE-ViSC		
	Wave 1 ($n = 249$)	Wave 2 ($n = 230$)	Wave 3 ($n = 150$)	Wave 1 ($n = 228$)	Wave 2 ($n = 201$)	Wave 3 ($n = 183$)	Wave 1 ($n = 326$)	Wave 2 ($n = 291$)	Wave 3 ($n = 211$)
Emotions									
Overt anger	1.55 (0.62)	1.60 (0.69)	1.80 (0.83)	1.57 (0.74)	1.58 (0.68)	1.66 (0.74)	1.69 (0.76)	1.74 (0.80)	1.62 (0.70)
Internalizing anger	2.18 (0.77)	2.11 (0.69)	2.09 (0.77)	2.20 (0.80)	2.05 (0.82)	2.01 (0.76)	2.19 (0.82)	2.18 (0.77)	1.94 (0.73)
Cognitions									
LFT Learning	2.93 (0.98)	3.24 (1.02)	3.45 (0.98)	2.89 (1.00)	2.93 (1.27)	2.94 (1.17)	2.90 (1.07)	3.06 (1.11)	2.89 (1.17)
LFT Entitlement	2.66 (0.81)	2.75 (0.80)	2.99 (0.84)	2.75 (0.87)	2.66 (0.95)	2.74 (0.95)	2.75 (0.89)	2.77 (0.91)	2.66 (0.99)
Behavior									
Bullying victimization	1.48 (0.61)	1.43 (0.60)	1.52 (0.70)	1.41 (0.60)	1.48 (0.65)	1.45 (0.66)	1.43 (0.63)	1.47 (0.67)	1.45 (0.71)
Bullying perpetration	1.28 (0.48)	1.31 (0.44)	1.39 (0.48)	1.24 (0.50)	1.30 (0.47)	1.30 (0.51)	1.27 (0.44)	1.34 (0.52)	1.32 (0.56)

Note. Sample size differs slightly ($n < 10$) by scales within one wave because of missing values. REBE = Rational Emotive Behavioral Education; ViSC = Viennese Social Competence; LFT = low frustration tolerance.

Table 3
Hierarchical Growth Modeling Results: Estimation Results

	Emotions		Cognitions		Behavior	
	Overt anger (n = 951)	Internalizing anger (n = 951)	LFT Entitlement (n = 945)	LFT Learning (n = 948)	Bullying perpetration (n = 954)	Bullying victimization (n = 954)
Level 1: Measurement						
Intercept	1.603***	2.135***	2.680***	2.857***	1.364***	1.541***
Time	0.016	-0.003	0.017	0.125***	0.009	-0.006
Time quadratic	0.001	-0.002	0.002	-0.009*	0.000	0.000
Level 2: Student						
Sex (0 = male, 1 = female)	-0.114**	0.040	-0.007	-0.114*	-0.152***	-0.122***
Level 3: Class						
ViSC-REBE vs. Control	-0.013	0.001	0.115	-0.038	-0.059	-0.068
REBE-ViSC vs. Control	0.164	0.063	0.105	-0.016	-0.016	-0.052
ViSC-REBE vs. Control × Time	-0.002	-0.010	-0.040*	-0.065***	0.007	0.015
REBE-ViSC vs. Control × Time	-0.027*	-0.013	-0.039**	-0.063***	0.002	0.009

Note. Unstandardized coefficients. The Control vs. ViSC-REBE and Control vs. REBE-ViSC groups are coded as 0 = control group and 1 = intervention group. REBE = Rational Emotive Behavioral Education; ViSC = Viennese Social Competence; LFT = low frustration tolerance.
* p < .05. ** p < .01. *** p < .001.

The analyses of the results revealed that both experimental conditions (ViSC-REBE and REBE-ViSC) were effective in reducing dysfunctional cognitions—the students managed to be more efficient in making accurate evaluations of the events and the short-term versus long-term consequences of their decisions. The effect size was small in changing the entitlement cognition and medium in decreasing LFT for learning. The REBE-ViSC condition was effective in reducing overt expression of anger, as the

students developed self-management skills. The effect size was small. Despite statistical significance, these effects have invaluable practical importance. Regarding the entitlement cognition and expressing anger through aggression, the means of the experimental group were below the scores of 62% of the control group. The students understood how important is to give up the idea that “other people should indulge and not frustrate our desires.” They were able to recognize when they were getting angry and learned

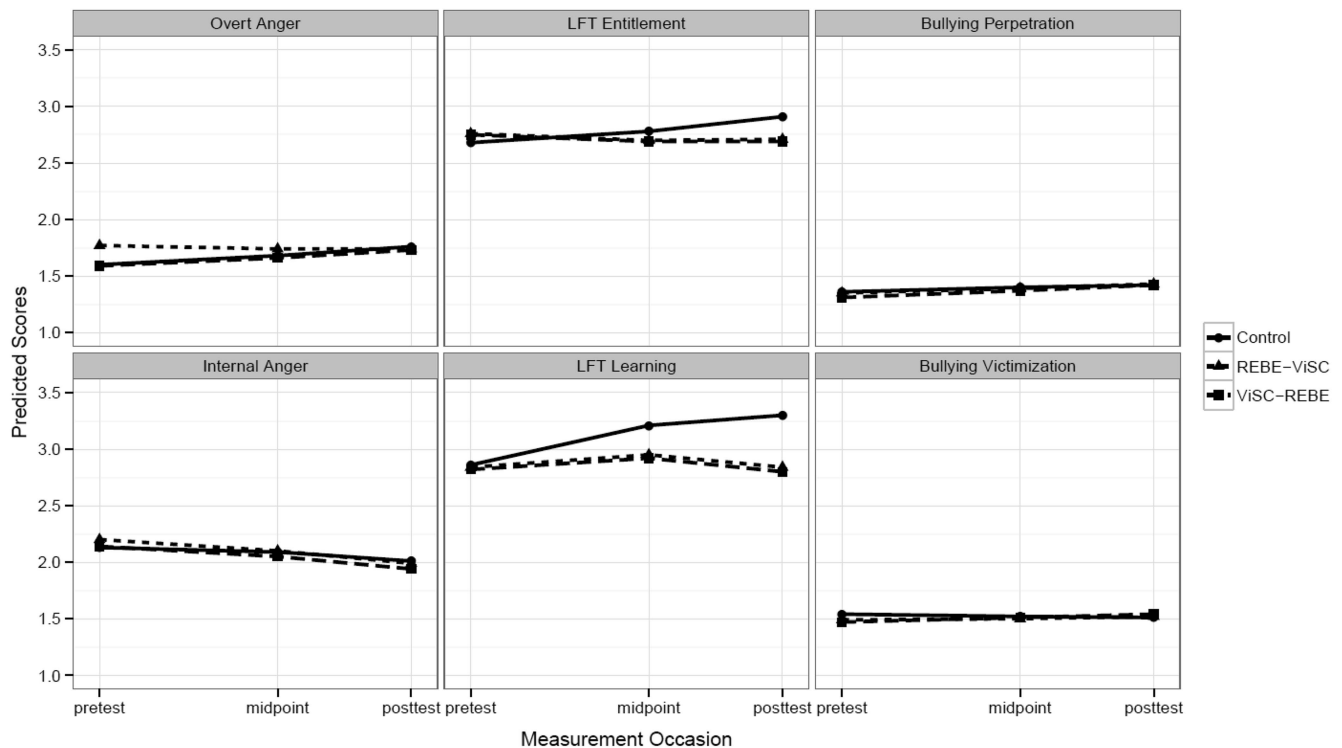


Figure 1. Trajectories for the dependent variables based on model-implied predicted scores by control and intervention groups.

to calm themselves before reacting. For LFT learning, the mean of the experimental group was below the scores of 73% of the control group. The students could compare the short- and long-term consequences of the belief "I can't stand the school!" Our program yield results that are similar to those achieved by SEL programs: $d = 0.57$ for SEL skills and $d = 0.24$ for emotional distress (Durlak et al., 2011; Wilson & Lipsey, 2007).

However, no changes regarding bullying behavior and victimization were found in the two experimental groups compared with the control group. The fact that no behavioral changes have been detected might be related to several reasons.

To begin with, it was not possible to implement a multilevel systemic approach in the present study. Program elements for teachers, parents, and school policies have not been implemented. Thus, the present study indirectly supports the idea that bullying prevention programs should broadly address all risk factors at the individual, family, school, and community levels (Craig & Pepler, 2007; Evans et al., 2014; Strohmeier & Noam, 2012; Swearer & Espelage, 2004). Because bullying is a complex form of aggression, for it to be reduced, it requires interventions in the different contexts that children encounter (Espelage & Horne, 2008; Espelage et al., 2013).

Second, external trainers delivered the training units once a week in the classes. Atria and Spiel (2007) applied a similar implementation model for the ViSC program, and they also did not find any long-term positive program effects regarding bullying and victimization. However, when the ViSC class component was delivered by teachers who participated in in-school trainings and who were equipped with knowledge of how to handle bullying cases in their schools, large program effects on both (cyber)bullying and (cyber)victimization have been reported (Gradinger et al., 2015; Yanagida et al., 2015). Durlak et al. (2011) also found that SEL universal school-based programs were more efficient in changing conduct problems, attitudes, positive social behaviors, emotional distress, and social and emotional skills when they were delivered by school teachers.

Furthermore, the REBE approach assumes that dysfunctional cognitions are responsible for anger, aggressive behavior, and bullying on the individual level (Flanagan et al., 2010; Morris et al., 2010). Children need time to practice rational beliefs in order to have more adaptive emotions and behaviors. The ViSC program fosters empathy and perspective taking, broadens the behavioral repertoire, and enhances responsibility among as many students in the school as possible (Strohmeier et al., 2012). To be able to change the complex behaviors of bullying, students need supportive family, friends, and school and community climates that encourage them to practice their newly acquired SEL skills in real-life situations.

Strengths and Limitations

The present study utilized a longitudinal quasi-experimental design and included a rather large sample of schools, classes, and students. Because the combined program was implemented in two temporal orders (REBE-ViSC vs. ViSC-REBE), it was possible to compare these two experimental groups with the control group. As Smith et al. (2012) suggested, in this experimental study, the schools were randomized to three different conditions implementing two distinct interventions: an SEL program (REBE) and an

antibullying program (ViSC). To investigate the constructs, validated self-assessment scales were used. The measure of bullying assessed physical, verbal, relational, property damage, and cyber forms, and provided a comprehensive bullying definition. It was not possible to realize a follow-up investigation; therefore, the study does not provide any insights regarding the long-term effectiveness of the REBE-ViSC program. Considering the importance of teachers as role models, the use of external trainers may have been a limitation of the present study. On the other hand, the implementation fidelity of the present study was high, which is usually not the case when teachers are the implementing the program contents (Schultes, Stefanek, van de Schoot, Strohmeier, & Spiel, 2014).

Implications and Outlook

To include the REBE component on the class level and to implement it before the antibullying class-level activities (REBE-ViSC) proved to be most beneficial in the present study, and is therefore recommended for future implementations. Our results confirm the idea that antibullying programs should be part of a wider school attempt to help the socioemotional development of children that involve both teachers and parents (Smith et al., 2012). When using the SEL framework for bullying prevention, schools foster the social and emotional competence of the entire academic community. In this way, students, teachers, and parents have the opportunity to apply SEL skills to a variety of bullying situations (Ragozzino & O'Brien, 2009).

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